



<http://dx.doi.org/10.11646/zootaxa.4057.4.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:1EF572F1-5038-4032-9065-F6FD3D51DC0F>

***Parapsyche* species (Trichoptera: Hydropsychidae: Arctopsychinae) of western North America**

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Abstract

The adult female, pupa, and larva of the 5 western North American species of the arctopsychine genus *Parapsyche*—*P. almota* Ross 1938, *P. elsis* Milne 1936, *P. extensa* Denning 1949a, *P. spinata* Denning 1949b, and *P. turbinata* Schmid 1968—are reviewed. The female and larva of *P. extensa* are described for the first time. The larvae of *P. spinata* and *P. turbinata* are described for the first time. The chaetotaxy of the larval forms of western North American *Parapsyche* is discussed and scanning electron micrographs are presented. Keys to the females, known pupae, and larvae are provided. Distributional and biological data are also included.

Key words: caddisfly taxonomy, description, chaetotaxonomy, larval keys

Introduction

This study initially focused on the association of the western North American larvae and adult females of *Parapsyche extensa* Denning 1949a, *P. spinata* Denning 1949b, and *P. turbinata* Schmid 1968. However, given the difficulty of identifying the larvae, the study was expanded to include all 5 western North American species, adding *P. almota* Ross 1938 and *P. elsis* Milne 1936. A review of works on chaetotaxy by Williams & Wiggins (1981), Lepneva (1964), and Scheffer & Wiggins (1986) suggested that examination of the chaetotaxy of *Parapsyche* fifth-instar larvae may prove useful for diagnosing the 5 western North American species. Nimmo (1987) and Schmid (1968) discussed and characterized the subfamily Arctopsychinae Martynov (as Arctopsychidae). Females of the 2 eastern North American *Parapsyche* species—*P. apicalis* (Banks 1908) and *P. cardis* Ross 1938—were described by Milne & Milne (1938), Nimmo (1987) and Stocks (2011); their larvae were described by Flint (1961).

Keys are provided for adult female western North American *Parapsyche* species and their known larvae and